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SOME ACCOUNT

OF

A FEVER

PREVALENT IN THE YEAR 1831;

BY

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Read before the College.

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PREFACE.

I have been induced now to publish the following Paper which was written some time ago, because I have had repeated opportunities of confirming the remarks contained in it; because the disease alluded to is not of unfrequent occurrence; and because many practitioners with whom I have conversed on the subject were not familiar with it. The disease to which I refer, is a fever, which I had occasionally seen previously, but which although marked by peculiar symptoms, I had been unable to classify previous to the year 1831, when numerous cases placed under my charge gave me an opportunity of studying its character, and afforded me experience, which I have found so useful in subsequent cases, that I venture to hope it may not prove unserviceable to others.

My object in submitting this Paper to the College is to describe some cases of fever which occurred on board the Grampus, a 50 gun frigate, lent by Government to the Seaman's Hospital Society as an Hospital for seafaring men belonging to the merchant service.

This institution to which I was physician furnished ample scope for studying acute diseases of all kinds, and especially fevers, for to them, as might be supposed, the sailor would be particularly obnoxious—his thoughtless character and reckless career on shore soon leaving him destitute of money, and exposing him to wants and privations of every sort. Hence fevers of the intermittent and remittent character during spring and autumn, and of the continued type during summer, presented themselves almost daily; and offered nothing remarkable, except that during the preceding summer, the continued fever chiefly affected the head and was relieved by active depletion.

During the spring of 1831, however numerous cases of fever presenting several peculiarities worthy of remark, as well with respect to the numbers simultaneously attacked, as from their type and the

treatment required, were admitted on board the Grampus. With respect to numbers, 40 persons were at one time similarly affected, and my observations will relate to 75 cases out of 119 fever patients admitted on board between January 1st and April 18th. With respect to the type, that will best appear by a detail of the symptoms exhibited, which I shall at once proceed to describe. The first great and leading symptom in those attacked, was prostration of strength so sudden and complete, that the stoutest would be in four-and-twenty hours unable to stand without support, or turn, unaided, in bed: this, and a peculiar dusky countenance, in some flushed, in others pale, were the appearances first noted on the admission of the patients.

More marked peculiarities were quickly observed; there was a singular brilliancy of the eye, there was often too a strange wildness of the look, a fixedness and intenseness in the gaze, which afforded a striking contrast to the more prominent signs of debility.

On enquiry being made of these men about their sensations, some denied all ailment, declaring themselves perfectly well; while others—and the majority were much depressed — bursting into tears, they would declare their conviction that they should die.

The appearance of one man on the contrary was painfully ludicrous, the occipito-frontalis muscle was contracted, his brow was wrinkled and his face wore a constant laugh, while his evacuations

were passing unconsciously beneath him and without his power to restrain them.

Some, when questioned, maintained for a time an obstinate silence, and then would give an incoherent answer in a loud voice and maniacal manner.

The disordered functions of the brain were variously and expressively described;—'roaring torrents in the ears'—'flashes of light before the eyes'—'fire in the brain'—were terms used to picture the excited intellect.

The most intimate acquaintances did not recognize each other—memory in some (though without loss of consciousness) was so completely gone that no history of the complaint could be obtained; many doubted their own identity; one supposed he '*had died*' and when questioned as to his reason, asked, if he lived why he did not feel?

The pupil of the eye was dilated rather than contracted; the conjunctiva in some was of a rose-red hue from minute vascular injection; in others, however, and in those where there was the greatest cerebral excitement, it was of the natural colour. The tongue was broad, thickly coated with a dirty fur, and moist: thirst was intense, the stomach bore food though no appetite was felt—vomiting was not common; hiccup was more frequent—the bowels were usually constipated, but if open, the evacuations passed involuntarily and the urine was frequently detained in the bladder from paralysis of its muscles.

The pulse was very weak, little if at all increased

in frequency, and was often observed to intermit: while feeling the pulse the tendons of the flexor muscles of the hand were noticed to twitch, without other subsultus except of the muscles of the mouth, which at times was obvious when the patient was quiet, but was most apparent after the jaw had been moved in speaking: the corrugator supercilii was often contracted occasioning a frown.

The temperature of the body generally differed little from health while that of the forehead was increased; upon still more minute investigation a rash in some, obviously though slightly elevating the cuticle, in spots or patches the size of a split pea was perceived, in others a dusky freckle-like eruption.

The rash when vivid, so much resembled measles, that it might easily be mistaken for it, but was to be distinguished by the absence of the usual premonitory symptoms, by its not assuming the crescentic figure as regularly as in measles, by the course it followed, and by its occurring in those who previously had had Rubeola.

The mucous membrane of the tonsils and soft palate in some was inflamed—others had true petechiæ or larger ecchymoses "vibices." Headache was complained of by many—but when desired to express what was most distressing—pain was referred to the limbs generally, to the back of the neck, and especially to the calves of the legs.

The progress of the complaint may be thus described: a general sense of ailment—languor—pain in the head and limbs was first perceived, to this,

horripilation and chilliness rather than rigor succeeded, with depressed pulse and desponding feelings,—such would be the symptoms of the patient on the day of attack, the ensuing night would be passed in watching, with great confusion in the head; and with a sensation as it was rendered of a change of being, this stage remained several days.

The next stage might be considered as marked by more active cerebral disturbance, by the appearance of the rash, which usually took place on the third day, or by inflammation of the lungs, but still in this stage there was very little reaction of the heart and arteries.

The third stage, when the disease terminated unfavourably, was indicated by partial paralysis—loss of consciousness—coma—universal subsultus or convulsions—a dry tongue—thick sordes on the teeth — copious discharges of blood from the bowels—obstinately closed jaw—cold extremities and death.

There was no marked change in the symptoms on the irruption or decline of the rash, it did not appear in all, but when it was slightest or did not break out, the cerebral symptoms were most severe.

In the course of the disease there was no critical sweat (perspiration indeed, where it did exist, gave no relief) there was no sudden termination, the return to health was slow—the course of recovery was anxious and fluctuating, and giddiness, deafness and debility remained long after the febrile symptoms had all declined.

During convalescence, the parotid—the inguinal

or axillary glands, swelled and suppurated in some, and matter was discharged from the ear * in many. One man lost part of the greater number of his toes, how much of the foot will remain to another is yet to be decided, in both, heat and redness with acute pain quickly gave way to mortification.

There was moreover a general tendency to hæmorrhage which spontaneously took place from the nose or bowels, and the leech bites were observed to bleed copiously.

I can hardly expect to describe the scene our wards or decks presented, the beds all occupied with such inmates in the different stages of the disease ; to me it is matter of painful interest to recal the unmeaning mutter of some, the singing of others, the comatose state of this patient, the madness of his neighbour, while the demands on all sides for drink, were more urgent than the nurses with all their assiduity could su ply.

But to return :—The sudden influx of a large number of cases bearing a peculiar character, yet with symptoms apparently contradictory, called for a variety in the treatment, I adapted therefore as nearly as I could the appropriate remedies to each, and awaited the result of observation.

Those were bled from the arm, or cupped, or leeched, in whom the cerebral symptoms were most urgent, who had most strength and whose conjunctiva was most suffused.

Subcarbonate of ammonia out of camphor mix-

* In ten cases, and it was a curious fact that it was always from the left.

ture, or effervescing saline was given to such as had sore throat, with weak pulse and slight head affection.

To those who, with a weak pulse and cold skin, had an excited nervous system, sulphuric ether with dilute spirit of Mindererus was given. Blisters at the same time were applied between the shoulders or to the nape of the neck, and opiates added at night.

Where intermissions took place bark or quinine was tried.

To some I gave mercury, in whom the tongue was dry and the pulse with any power, while cold lotions and pounded ice were applied to the shorn scalp, and mustard cataplasms to the feet.

Half a drachm of sulphuric ether and the same quantity of dilute-sulphuric acid in a pint of water (Sutton's punch) or water acidulated with muriatic acid was allowed for drink.

The diet consisted of milk, beef-tea, and arrow-root, as the case might seem to require; chlorine was disengaged, and windsails and other means of ensuring free ventilation were resorted to, by way of preventing infection.

The cases in which ammonia was given did best, but they were the slightest.

The benefit from the anodyne could not be doubted; on its well-timed administration consciousness returned, vigilance yielded to calm sleep, the arm lately occupied in tracing imaginary specks became quietly folded in bed, convulsive move-

ments were stilled: but these good effects could only with confidence be anticipated in the cases where the disease was protracted, or in a weak subject where it had but little advanced, or after proper depletion had been practiced. The best method of effecting this was by leeches, and not only did they afford the most advantageous mode of depletion, but were in many the principal means of cure: general bleeding must be said to have been ill borne, yet many did well from whom a small quantity of blood was taken from the arm, especially where any complication of the lungs existed.

The benefit of mercury seemed doubtful at first, as the mouth in some became sore without any abatement of the symptoms, but many, and very severe cases did well under its free and continued use. Inflammation of the tongue came on in one case in which it was employed, although the quantity had not been large, and the affection of the gums was slight.

Emetics when administered immediately on the accession of the fever, in several instances appeared at once to arrest it, after the symptoms however were established they were of little use not even clearing the tongue. Active purgatives of calomel and of jalap, produced a beneficial determination of the bowels.

No advantage whatever was derived from bark in the earlier stages, combined with acids it proved useful when the fever had abated.

I feel much confidence that blisters behind the

ears, upon the nape of the neck, or scalp, contributed greatly to the recovery of many in whom the brain was obviously congested.

Wine and brandy were often required, even after slight depletion, yet their use required much caution as a rapid transition in some from sinking to phrenzy took place.

The total number up to the 18th of April was seventy-five, of these twelve died.* The morbid appearances discovered upon dissection were almost entirely confined to the lungs and brain. The various tissues of the lungs were affected in some, but in all, some affection of the membranes of the brain was found, either turgescence of vessels, increased vascularity, effusion of serum or pus, or the deposition of lymph, varying from the thickness of a line to a quantity sufficient only to render the arachnoid opaque.

The ventricles were the seat of the effusion of serum, pus and lymph were deposited at the base, on the hemispheres and between the convolutions of the brain.

* A great mortality, but then I ought to mention that, one man I saw but once, one had been three weeks ill under medical care, and died in forty-eight hours after admission, one was in a comatose state when taken in, from whieh he never was roused, one had tubercles in his lungs, two had had chronic bronchitis, one had enlarged liver and spleen, so that of those cases which may be said to have come properly under medical treatment, with a fair chance of success, the mortality was five in sixty-eight.

It would be impossible to obtain more positive contradiction to the theory of Broussais, than was afforded by examination of the mucous membranes of the bowels in these patients; they were not and obviously had not been inflamed, there were no enlarged glands, there was no discolouration, no softening, no thickening, no ulceration, even where hemorrhages had occurred. Turgescence or injection of vessels alone marked the spot whence the blood had transuded; several died of inflammation of the lungs, which in one instance had the fœtor of gangrene, but under what circumstances soever of complication death took place, the membranes of the brain were always affected.

Here I may be told by those who can only see one disease and that one local inflammation, every circumstance is explained, the enquiry need not proceed, the fever should be called "meningitis;" the cure should have been free depletion, an error into which I acknowledge I was in some degree betrayed, for on examining the bodies of the first who fell victims to the disease and mortified at the unsuccessful termination of their cases, I determined to be more active in my treatment, and in a case which appeared to justify the measure I took blood from the temporal artery. Some benefit indeed was for a time derived from this treatment, but sudden phrenzy with rapid sinking in that and other instances where free depletion was employed, satisfied me I had more to treat than simple inflammation. The blood was of a loose texture,

often did not cup or buff, the pulse did not rise during or after venesection or other depletion ; while the benefit derived from an opposite mode of treatment in several cases together with the appearance of the rash, and the history of the complaint all concur in showing the specific nature of the disease.

This I shall now attempt to prove, and in doing so, I must refer to several circumstances connected with the admission of the cases on board the Grampus. As I have already observed out of 119 cases 75 presented the peculiar character just described. These cases were chiefly sent on board from one of the asylums which had been established in the eastern suburb of the metropolis to relieve by food and shelter the misery in which numbers of the lower class of maritime people are involved during the spring. From one of these asylums, that in Globe-street, Wapping, the greater number of cases was brought. The cases at first, however, were isolated, though their features were marked and we had learned to designate the attack by the name of the asylum fever. They did not, however, attract particular attention until their numbers increased to such an extent, as to occupy every available bed and fully to engage the attention of all the medical residents.

The fever I consider to be specific, by which I mean a disorder not only peculiar in its character and marked in its symptoms, but one capable of being communicated by infection or propagated by its own virus. My reasons for believing in the

infectious nature of this disease are, first, the mode in which the disorder appeared in those attacked. From one to three hundred persons were nightly accommodated in the Globe-street asylum, they took up their quarters at night and although previously in good health on going in, many would be in the morning too ill to stand.

Secondly, from what took place when the disease had been introduced on board the Grampus, for here among patients previously convalescent from other disorders, many instances occurred of a similar attack and in those also in attendance on the sick. The number of instances of the first class was eight, and all the nurses (four) who had the charge of the medical cases on board were shortly after and simultaneously attacked by the same disease. Three assistant nurses supplied the places of those who were invalided, two of whom also had the fever, and in all these cases the eruption was well marked.

Thirdly, from what happened when these nurses returned to their homes on shore, which was the appearance of a similar train of symptoms in the families of those who had children. The disease was less strongly developed indeed amongst them, but they suffered from great prostration of strength and giddiness with confusion and pain in the head. They had the same appearance of tongue. The disease was quickly arrested in them by emetics and the rash appeared only in one who had been ill several days before notice was taken of it. This chain of evidence appears to me conclusive, but it may yet be further strengthened by other

collateral circumstances. In the first place, I ascertained, that no disorder similar to that which I have described existed either on board vessels moored near, or at Greenwich, or Deptford, where the Grampus was stationed. Dr. Sutton had it in his power to give me precisely the information I required on the latter points, as he held the situation of Physician to the Kent Dispensary, but in reply to a letter on the subject he said, that "both from his own observation and from enquiries of other medical practitioners that he was "unable to conclude otherwise than that no "epidemic fever had existed at that season, and "indeed that the neighbourhood had been in an "unusual degree exempt from fever."

I visited the asylum in Globe-street and found James Clark an attendant stretched on his bed slowly recovering from fever, Robert Clark able to go about though with difficulty from a similar ailment, Charles a brother of James who had sat up two nights with him was away ill they told me of fever. Mr. Allen the superintendant had been ill but was then convalescent from a similar attack. Every body indeed they maintained who had been in communication with the sick was then suffering or had suffered.

The peculiar train of symptoms, and the characteristic rash justify me I conceive in ranking this amongst our specific fevers, and the mode in which it spread, warrants I trust the inference which I have drawn from it, viz. that it is capable of being communicated from one individual to another. At

the asylum a room was fitted up as an infirmary, where the fever cases were kept till they could be removed elsewhere, this room adjoined one in which the destitute were received, so that those who entered were exposed to infection, it was thus I believe communicated to them, it was conveyed by them to the inmates of the Hospital ship and also to the nurses on board, who again carried the infection to their families on shore. Such a chain of evidence cannot be held to be fortuitous, it establishes more than a probability, it amounts to proof, a proof as conclusive as that on which we ground our conviction of the infectious nature of the measles or scarlet fever.

I feel a great degree of interest in thus establishing the infectious nature of this form of fever, not having previously had the opportunity of satisfying myself on this point, even after many years of observation. The great attention paid to proper ventilation at all our principal hospitals preventing the spread of disorders, undoubtedly propagated by infection, and I had seen more decided examples of the communication of erysipelas from one individual to another, than I ever had of the communication of any of our ordinary forms of continued or eruptive fever.

In alluding to the subject of erysipelas, it has occurred to me that this disease may sometimes be induced by the same cause, or may be considered as one of the forms of this fever, or that the same constitution of the air may be favourable to the production of both, for it had been observed

that erysipelas prevailed very generally during that spring; it occurred in the ten cases of fever just narrated, and the surgeon to the Grampus, Mr. Lawson, suffered severely from an attack of fever, with idiopathic erysipelas of the head coming on, during the period included in my report, and immediately after close and anxious attendance upon one of the cases.

Of the actual origin of this disease I cannot be expected to say much, but I deem it material to state that I do not believe it was generated in the asylum alluded to; such a fever had appeared in various parts of the south of England before it prevailed there or became the subject of my personal observation.

I will not longer trespass upon the time of the College, nor weary the attention of its Members by pointing out the distinguishing marks between this and other fevers, which indeed would here be a work of supererogation. My object has been to describe the disease as I actually witnessed it, and to draw such conclusions as I felt warranted in doing from the facts, which presented themselves my notice during its course and prevalence.

Since writing the above paper I have had very many occasions of confirming my notion of the infectious nature of the fever there described, daily instances occurring of whole families and others in communication with the sick suffering from this cause. During the spring of this present year (1837) very numerous cases have been admitted into St. Bartholomew's Hospital, precisely analogous in symptoms, in progress and in the characteristic rash, leaving no doubt on my mind of the specific nature of the disorder. It is a complaint of more frequent occurrence among the lower orders of society, and hence may be explained the fact that it is without a definite name, although as distinct a disorder as measles or scarlatina.

The nature of the attack is of a low typhoid or malignant character and great caution is requisite in its management, more recent experience confirming the impropriety of large evacuations of any kind, and confirming the notion that local bleeding alone was generally admissible; and that leeches even when few in number will often seriously depress, that wine and other stimulants and those administered with no sparing hand and given at intervals of only a few minutes are absolutely requisite in many cases to ensure the safety of the patient.

A disorder somewhat similar appears to have been described by Huxham and called by him the ner-

vous fever; nearly allied to it too, are the low, the spotted, the camp, the gaol or hospital fever, of other writers; who may have had opportunities of seeing it in those situations implied by the designation which they have given to it. The nature, however, of the fever, is in no way conveyed by such an appellation and the character of the rash is nearly overlooked. This indeed is not always present nor is a rash always present in scarlet fever, under such circumstances I consider that a name implying the character and common features of the disorder may be found in the term which I should propose to apply to it, viz. *Febris typhodes rubeoloida.*

I have been induced by a desire to afford some notion of the character of the cases admitted on board the Hospital Ship, to give the following Table of the cases admitted during the years 1829, 30, and 31, including the period of the prevalence of the low Rubeoloid Fever.

STATEMENT OF MEDICAL PATIENTS

DURING 1829.

ACUTE DISEASES.	No. of Cases.	Have Died.
Fevers.		
Type { Continued - - - - 181 / Intermittent - - - - - 112 }	293	7
Inflammation of the Lungs, &c.		
One of these men died in two hours after his admission, one of Consumption - - - -	118	10
Inflammation of the Bowels.		
Most of the fatal cases were old Indian Dysenterics, in which previous to admission all remedial means had failed - - - - - -	62	10
Affections of the Brain, &c.		
One died of Apoplexy; one deranged. There were several cases of temporary insanity from drink -	28	3
Rheumatism.		
Two of these cases left with Rheumatic Affection of the Heart - - - - - -	91	0
CHRONIC DISEASES.		
Pthisis.		
Several of these were Inhabitants of tropical climates, and South Sea Islanders - - - -	30	25
Diseases of the Heart, &c.		
Two of these cases were Aneurisms of the Aorta -	8	2
Disorders of the Stomach, &c.		
Under this head I have placed Worms, and Cutaneous Eruptions, and one case of supposed poisoning by sumach - - - - - -	29	0
Dropsy.		
In all those who died the Dropsy was dependent upon Disease of the Kidneys - - - -	11	3
Scurvy - - -	19	0
Total	689	60

STATEMENT OF MEDICAL PATIENTS,

DURING 1830.

	No.	Died.
Fevers,	273	6
Inflammation in the Chest and parts connected,	126	15
Affections of the Brain,	24	7
Diseases in the Abdomen,	69	5
Rheumatism,	141	2
Phthisis,	22	12
Scurvy,	11	0
Dropsy and Diseases of the Heart,	25	13
Disorders of the General Health,	10	1
Total.	701	61

DURING 1831.

	No.	Died.
Fevers,	387	33
Affections of the Brain,	9	2
Inflammation in the Chest and parts connected,	108	12
Affections of the Bowels,	84	13
Rheumatism,	125	2
Phthisis,	30	14
Scurvy,	10	0
Dropsy,	30	11
Disorders of the Stomach,	24	0
Chronic Nervous Affections,	14	1
Total.	821	88

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